



CALIFORNIA ENERGY COMMISSION

AB 118 Funding Recommendations

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Opportunities and Priorities

- Achieve 2020 Transportation Fair Share Greenhouse Gas Emission Reductions – Projections from Plausible Scenarios.
- Increase California Economic Development Opportunities – Locate Facilities in California.
- Fund Practical Near Term Opportunities That Offer Pathway to Future 2050 Priorities
- Identify Government Roles (And Investment Amounts) That Can Make a Difference



How Recommendations Were Developed

- AB 118/AB 109 Direction and Eligibility
 - Vehicles and Components
 - Fuel Infrastructure
 - Fuel Production
 - Manufacturing Incentives
 - Workforce Training
- Emphasis on Deployment, but Eligibility for Research, Development, and Demonstration



How Recommendations Were Developed

- GAP Analysis
 - Government and Private Sector Investment
 - Relevance of Other Funding to California
 - Coordination with ARB
- Informal Discussions – Approximately 100 Meetings
 - Federal, State, and Local Governments
 - Fuel Producers, Terminal Operators, and Fueling Infrastructure Owners
 - Fleet Managers/Operators
 - Automakers, Engine and Truck Manufacturers, and Upfitters
 - Utilities
 - Public Interest Organizations and Consumer Groups
 - Universities



Electric Drive

Action (Light-, Medium- and Heavy-Duty Vehicles)

- Support pre-commercial, demonstration and deployment of electric drive technologies, including upfit/retrofit applications for PHEV and BEV.

Rationale

- Offer incentives (rebates) in coordination with ARB to help offset differential costs for deployment of low GHG emission vehicles (OEM and ARB certified retrofits) and possibly components.
- Co-fund niche market demonstrations and differential costs of low GHG MDV and HDV applications.



Electric Drive

Action

- Support development of public access electric charge stations.
- Support non-road demonstrations and deployment, including TSE, TRU, cold ironing, forklifts, harbor craft, locomotive, etc.

Rationale

- Co-fund early adopter network of public access charging to support expected roll out of low GHG emission vehicles (OEM and retrofit).
- Coordinate with ARB to co-fund early action and surplus options to show proof of concept and/or accelerate market deployment, possibly through loans.



Hydrogen

Action

- Support high-volume fleet and retail fueling stations.
- Support mixed-use hydrogen fueling stations for transit, H/CNG and Hythane fuels and other applications (forklifts).

Rationale

- Co-fund fueling network to support early adopter vehicles and accelerate increased hydrogen fuel through multiple uses to maximize low GHG emissions.



Hydrogen

Action

- Support low cost development of renewable sources of hydrogen.
- Support demonstrations of low cost tank designs and components for fueling station storage and evaluate fuel cells in transportation niche

Rationale

- Co-fund development of projects to produce low GHG emission feedstocks and meet 33 percent renewable requirement (SB 1505).
- Co-fund development of technology to reduce component cost and accelerate development of multiple low GHG emission options.



Biofuels

Action

- Support development of in-state biofuel production facilities, including projects that enhance transition of imported corn to low GHG California feedstocks and develop waste residues, biomethane, biogas, biodiesel/renewable diesel and purpose grown crop sources.

Rationale

- Co-fund development of California projects to develop low GHG emission fuels, reduce reliance on imported fuels and stimulate California economic benefits. Explore loan financing for some options.



Biofuels

Action

- Support expansion of E-85 fueling stations.
- Support biodiesel/renewable diesel fuel storage/blending terminals.

Rationale

- Co-fund development of fueling station network to support availability of OEM flexible fuel vehicles and accelerate achieving low GHG emissions.
- Co-fund projects to maximize early GHG emission reductions in MDV and HDV markets. Explore loan guarantees.



Natural Gas and Propane

Action

- Support deployment of OEM and retrofit LDV, MDV, and HDV in early adopter markets.
- Support the development of MDV and HDV engine and fueling and storage technologies.

Rationale

- Offer incentives (rebates) in coordination with ARB to offset differential vehicle costs.
- Co-fund development of low GHG emission technology to increase options for transition and merging with improved efficiency.



Natural Gas and Propane

Action

- Support development and retrofit of existing fueling infrastructure.

Rationale

- Co-fund fueling station projects to support growth in low GHG emission vehicle availability and expansion of fleets and other buyers. Explore loans and loan guarantee financing options.



Vehicle and Engine Efficiency

Action

- Develop and demonstrate LDV, MDV, and HDV engine design and components, hydraulic hybrid, and electric hybridization with diesel engines and alternative fuel engines.

Rationale

- Co-fund vehicle and component development to increase GHG emission reductions in multiple types of engine fuels and market niche applications.



Non GHG Reduction

Categories

Action

- Support workforce training initiatives with employers, manufacturers, training programs, and government agencies.
- Support development of sustainability best management practices, standards, verification programs, and technical research.

Rationale

- Emerging industry and new to market vehicle and fuel options require transition funding to meet industry and consumer needs.
- Full fuel cycle analysis and measurement requires independent methods to verify GHG emission reduction results.



Non GHG Reduction Categories

Action

- Support development of standards and certification for fuels and vehicles.
- Support public outreach and education programs.

Rationale

- Co-fund development of government standards, guidelines and certification tests to enhance statewide transition to alternative fuel and vehicle options.
- Co-fund programs to provide independent information source and increase awareness of low GHG transportation options.



GHG Reduction Categories

Action

- Support updates to FFCA, market, fuel and technology assessments, financing mechanisms, reporting metrics, and program effectiveness.

Rationale

- Fund fundamental analysis and program activities to stay current and influence future funding decisions to reflect market changes, research insights, and financing trends.



Manufacturing and Production Incentives

Actions

- Support development of equipment manufacturing facilities located in California.

Rationale

- Provide incentives in conjunction with other state and local business retention, expansion and recruitment programs to accelerate in-state use of low GHG emission fuels and vehicles. Explore tax exemptions, loans and loan guarantees for some options.



Funding Recommendation Conclusions

- Reflect analysis reflecting GHG emission reduction potential and practical, near term market, technology and financing factors.
- Reward early adopters that maximize GHG emission reductions at earliest timeframes to meet 2020 goals and transition to 2050 vision.
- Flexible to shift as demand and market growth justifies optional funding allocations.